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EXAMINER	
JONES, DAVID	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/725,946	WATANABE ET AL.	
	Examiner	Art Unit	
	David L Jones	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,13,19-26 and 39-58* is/are rejected.

7)☒ Claim(s) *7-12, 14-18,27-38* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 November 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 2/23/01 was filed after the mailing date of the application on 11/30/00. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: fig. 10, #15. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: fig. 6, #61; fig. 10, #100; fig. 13, #130 and #132. Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

6. Claim 54 is objected to because of the following informalities: on line 27, the word "bit" has been misspelled, in the claim it is spelled "bid". Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. The term "by a pixel" in claims 1-3, 20, 23, 43-44, 47-48, 54, and 56-57 are a relative term, which renders the claim indefinite. The term "by a pixel" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Within the specification the term has been used repeatedly, the term appears to mean "of a pixel", but it is unclear as to exactly what is being referenced.

9. Claims 1, 3, 20, 21, 42, 44, 48, 54, and 57 recite the limitation "drawing command" in the claims. There is insufficient antecedent basis for this limitation in the claim.

10. Claims 1 and 42 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the claims the phrase "hereinafter referred to as outputting control language", it is unclear what it is referencing.

11. Claim 2 recites the limitation "said bit map" in claim 2. There is insufficient antecedent basis for this limitation in the claim. The claim states "for processing a photo image generated from bit map data", which is understood to mean the original image is a bitmap image, but in the claim it is unclear if it is being converted back to a bitmap image or what is being done.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 1, rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (US 5,128,748).

Regarding claim 1, Murakami et al. discloses (column 6, lines 4-27) an image processing apparatus for generation of an outputting image by color processing to convert a color image into color data adapted for said output unit, compromising:

command image processing means (fig. 2, 100, discrimination unit, (column 6, lines 28-36) for generating an image having color information of a pixel, by performing color processing on color data of a command image on the basis of color palette information given to the bits belonging to region specified by a drawing command. Murakami teaches that the discriminator decides if the each pixel coming in belongs to either a character or photograph, color or monochrome for the image. As can be seen in figure 3, the incoming values are transduced from RGB to Y and the two values of chrominance. It would have been obvious to one of ordinary skill in the art at the time the invention was made that although Murakami has not explicitly disclosed that each pixel is color processed on the basis of a color palette, that by dividing each pixel into the values of luminance and chrominance is utilizing color space processing.

14. Claims 2, 13, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chikauchi (US 6,021,257).

Regarding claim 2, Chikauchi discloses (fig. 2, column 6, lines 22-42) an image processing apparatus for generation of an outputting image by color processing to convert a color image described in an outputting control language for output unit being used to convert into color data adapted for an output unit wherein image processing means for processing an image having color information for pixel processing of an image generated from bitmap data comprising:

color number processing means (fig. 4, 203 and 204, column 8, lines 8-43) for deciding on at least one kind of representative color by compacting color data of said image;

representative color processing means (205)for color processing of said representative color; and

image restoring means (107) for converting said image into an image on the basis of said color processed representative color.

As seen in figure 8, (column 10, lines 1-67) Chikauchi teaches that each time a new character (including a control code) that the discriminating section is discriminating if a particular data item, then the color selector acquires data in a particular amount (understood to be an area of size), at this point a representative color is found by utilizing the color table. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the system as taught by Chikauchi is taking into consideration all types of image including a photo image.

Regarding claim 13, Chikauchi teaches (column 8, lines 39-53) that after all color represented for a particular block the information is sent output section for recombination.

Regarding claim 19, the claim is analogous to claim 2, except outputting control language converting means (206) for converting into outputting control language said image for which the representative color is decided on. Chikauchi teaches (column 8, lines 58-67 and column 91-19, lines) that the print information is converted to print language for output on the printer.

15. Claims 3-6, 20-26, and 39-58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chikauchi and further in view of Murakami et al.

Regarding claim 3, Chikauchi discloses (fig. 2, column 6, lines 22-42) an image processing apparatus for generation of an outputting image by color processing to convert a color image described in an outputting control language for output unit being used to convert into color data adapted for an output unit wherein image processing means for processing an image having color information for pixel processing of an image generated from bitmap data comprising:

color number processing means (fig. 4, 203 and 204, column 8, lines 8-43) for deciding on at least one kind of representative color by compacting color data of said image;

representative color processing means (205)for color processing of said representative color; and

image restoring means (107) for converting said image into an image on the basis of said color processed representative color and is also forming image synthesis through the OR gate 210.

As seen in figure 8, (column 10, lines 1-67) Chikauchi teaches that each time a new character (including a control code) that the discriminating section is discriminating if a particular data item, then the color selector acquires data in a particular amount (understood to be an area of size), at this point a representative color is found by utilizing the color table. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the system as taught by Chikauchi is taking into consideration all types of image including a photo image.

Murakami et al. discloses (column 6, lines 4-27) an image processing apparatus for generation of an outputting image by color processing to convert a color image into color data adapted for said output unit, compromising:

object image processing means (fig. 2, 100, discrimination unit, (column 6, lines 28-36) for generating an image having color information of a pixel, by performing color processing on color data of a command image on the basis of color palette information given to the bits belonging to region specified by a drawing command. Murakami teaches that the discriminator decides if the each pixel coming in belongs to either a character or photograph, color or monochrome for the image.

Chikauchi and Murakami et al. are analogous art because they both are from the same field of endeavor, image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the discriminating unit of Murakami et al. with the system of Chikauchi.

The suggestion/motivation for doing so would have been to provide for discriminating between a line or photograph and color or monochrome and further the data composite unit allows for putting the image together for printing or for viewing on a monitor

Therefore, it would have been obvious to combine Murakami et al. with Chikauchi to obtain the invention as specified in claim 3.

Regarding claim 4, Murakami et al. discloses (column 6, lines 4-27) an image processing apparatus for generation of an outputting image by color processing to convert a color image into color data adapted for said output unit, compromising:

command image processing means (fig. 2, 100, discrimination unit, (column 6, lines 28-36) for generating an image having color information of a pixel, by performing color processing on color data of a command image on the basis of color palette information given to the bits belonging to region specified by a drawing command. Murakami teaches that the discriminator decides if the each pixel coming in belongs to a character or photograph, color or monochrome for the image. As can be seen in figure 3, the incoming values are transduced from RGB to Y and the two values of chrominance. It would have been obvious to one of ordinary skill in the art at the time the invention was made that although Murakami has not explicitly disclosed that each pixel is color processed on the basis of a color palette, that by dividing each pixel into the values of luminance and chrominance is utilizing color space processing.

Color palette information extracting means (101, column 7, lines 45-68) for extracting said color palette information on said command image;

extracted palette color processing mans for performing said color processing on the basis of said color palette information;

image drawing means for converting said command image into said first pixel image on the basis of said color processed color palette.

Regarding claim 5, Chikauchi discloses (fig. 2, column 6, lines 22-42) an image processing apparatus for generation of an outputting image by color processing to convert a color image described in an outputting control language for output unit being used to convert into color data adapted for an output unit wherein image processing means for processing an image having color information for pixel processing of an image generated from bitmap data comprising:

color number processing means (fig. 4, 203 and 204, column 8, lines 8-43) for deciding on at least one kind of representative color by compacting color data of said image;

representative color processing means (205)for color processing of said representative color; and

image restoring means (107) for converting said image into an image on the basis of said color processed representative color and is also forming image synthesis through the OR gate 210.

Regarding claim 6, Chikauchi discloses (fig. 2, column 6, lines 22-42) an image processing apparatus for generation of an outputting image by color processing to convert a color image described in an outputting control language for output unit being used to

convert into color data adapted for an output unit wherein image processing means for processing an image having color information for pixel processing of an image generated from bitmap data comprising:

Image dividing means for dividing said image into a plurality of image blocks; and representative color deciding means for deciding on at least one kind of representative color for each of said blocks on the basis of color data statistical distribution of pixels in said block.

As seen in figure 8, (column 10, lines 1-67) Chikauchi teaches that each time a new character (including a control code) that the discriminating section is discriminating if a particular data item, then the color selector acquires data in a particular amount (understood to be an area of size), at this point a representative color is found by utilizing the color table. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the system as taught by Chikauchi is taking into consideration all types of image including a photo image. Further, as understood from Chikauchi that the system is intaking the image in image blocks and makes a determination of the blocks.

Regarding claim 20, Chikauchi discloses (fig. 2, column 6, lines 22-42) an image processing apparatus for generation of an outputting image by color processing to convert a color image described in an outputting control language for output unit being used to convert into color data adapted for an output unit wherein image processing means for processing an image having color information for pixel processing of an image generated from bitmap data comprising:

color number processing means (fig. 4, 203 and 204, column 8, lines 8-43) for deciding on at least one kind of representative color by compacting color data of said image;

representative color processing means (205)for color processing of said representative color; and

image restoring means (107) for converting said image into an image on the basis of said color processed representative color and is also forming image synthesis through the OR gate 210.

As seen in figure 8, (column 10, lines 1-67) Chikauchi teaches that each time a new character (including a control code) that the discriminating section is discriminating if a particular data item, then the color selector acquires data in a particular amount (understood to be an area of size), at this point a representative color is found by utilizing the color table. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the system as taught by Chikauchi is taking into consideration all types of image including a photo image. Outputting control language converting means (206) for converting into outputting control language said image for which the representative color is decided on. Chikauchi teaches (column 8, lines 58-67 and column 91-19, lines) that the print information is converted to print language for output on the printer.

Murakami et al. discloses (column 6, lines 4-27) an image processing apparatus for generation of an outputting image by color processing to convert a color image into color data adapted for said output unit, compromising:

object image processing means (fig. 2, 100, discrimination unit, (column 6,

lines 28-36) for generating an image having color information of a pixel, by performing color processing on color data of a command image on the basis of color palette information given to the bits belonging to region specified by a drawing command. Murakami teaches that the discriminator decides if the each pixel coming in belongs to a character or photograph, color or monochrome for the image.

Chikauchi and Murakami et al. are analogous art because they both are from the same field of endeavor, image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the discriminating unit of Murakami et al. with the system of Chikauchi.

The suggestion/motivation for doing so would have been to provide for discriminating between a line or photograph and color or monochrome and further the data composite unit allows for putting the image together for printing or for viewing on a monitor

Therefore, it would have been obvious to combine Murakami et al. with Chikauchi to obtain the invention as specified in claim 20.

Regarding claims 21 and 22, as taught in claim 20, with further limitation as seen in figure 8, (column 10, lines 1-67) Chikauchi teaches that each time a new character (including a control code) that the discriminating section is discriminating if a particular data item, then the color selector acquires data in a particular amount (understood to be an area of size), at this point a representative color is found by utilizing the color table. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the system as taught by Chikauchi is taking into

consideration all types of image including a photo image. Outputting control language converting means (206) for converting into outputting control language said image for which the representative color is decided on. Chikauchi teaches (column 8, lines 58-67 and column 91-19, lines) that the print information is converted to print language for output on the printer. And that each a first and second pixel are incorporated together into the output section, then to the printer driver for printing according to Chikauchi.

Regarding claim 23, Chikauchi discloses (fig. 2, column 6, lines 22-42) an image processing apparatus for generation of an outputting image by color processing to convert a color image described in an outputting control language for output unit being used to convert into color data adapted for an output unit wherein image processing means for processing an image having color information for pixel processing of an image generated from bitmap data comprising:

color number processing means (fig. 4, 203 and 204, column 8, lines 8-43) for deciding on at least one kind of representative color by compacting color data of said image;

representative color processing means (205)for color processing of said representative color; and

image restoring means (107) for converting said image into an image on the basis of said color processed representative color and is also forming image synthesis through the OR gate 210.

As seen in figure 8, (column 10, lines 1-67) Chikauchi teaches that each time a new character (including a control code) that the discriminating section is discriminating if a particular data item, then the color selector acquires data in a particular amount

(understood to be an area of size), at this point a representative color is found by utilizing the color table. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the system as taught by Chikauchi is taking into consideration all types of image including a photo image.

Murakami et al. discloses (column 6, lines 4-27) an image processing apparatus for generation of an outputting image by color processing to convert a color image into color data adapted for said output unit, compromising:

object image processing means (fig. 2, 100, discrimination unit, (column 6, lines 28-36) for generating an image having color information of a pixel, by performing color processing on color data of a command image on the basis of color palette information given to the bits belonging to region specified by a drawing command. Murakami teaches that the discriminator decides if the each pixel coming in belongs to a character or photograph, color or monochrome for the image.

Chikauchi and Murakami et al. are analogous art because they both are from the same field of endeavor, image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the discriminating unit of Murakami et al. with the system of Chikauchi.

The suggestion/motivation for doing so would have been to provide for discriminating between a line or photograph and color or monochrome and further the data composite unit allows for putting the image together for printing or for viewing on a monitor

Therefore, it would have been obvious to combine Murakami et al. with Chikauchi to obtain the invention as specified in claim 23.

Regarding claim 24, Murakami et al. discloses (column 6, lines 4-27) an image processing apparatus for generation of an outputting image by color processing to convert a color image into color data adapted for said output unit, compromising:

command image processing means (fig. 2, 100, discrimination unit, (column 6, lines 28-36) for generating an image having color information of a pixel, by performing color processing on color data of a command image on the basis of color palette information given to the bits belonging to region specified by a drawing command. Murakami teaches that the discriminator decides if the each pixel coming in belongs to a character or photograph, color or monochrome for the image. As can be seen in figure 3, the incoming values are transduced from RGB to Y and the two values of chrominance. It would have been obvious to one of ordinary skill in the art at the time the invention was made that although Murakami has not explicitly disclosed that each pixel is color processed on the basis of a color palette, that by dividing each pixel into the values of luminance and chrominance is utilizing color space processing.

Color palette information extracting means (101, column 7, lines 45-68) for extracting said color palette information on said command image;

extracted palette color processing mans for performing said color processing on the basis of said color palette information;

image drawing means for converting said command image into said first pixel image on the basis of said color processed color palette.

Regarding claim 25, the claim is analogous to claim 5.

Regarding claim 26, the claim is analogous to claim 6.

Regarding claim 39, Murakami et al. discloses in figure 4, BHT (620) for printer, which it would have been obvious to one of ordinary skill in the art at the time the invention was made is outputting language is printer description language.

Regarding claim 40, Murakami et al. discloses in figure 4, BHT (610) for display, which it would have been obvious to one of ordinary skill in the art at the time the invention was made is outputting language is for the display unit.

Regarding claim 41, Murakami et al. discloses in figure 4, BHT (610) for display, which it would have been obvious to one of ordinary skill in the art at the time the invention was made is outputting language is for the display unit and can be adapted for GDI or any language necessary.

Regarding claims 42-44, Chikauchi discloses (fig. 2, column 6, lines 22-42) an image processing method for generation of an outputting image by color processing to convert a color image described in an outputting control language for output unit being used to convert into color data adapted for an output unit wherein image processing means for processing an image having color information for pixel processing of an image generated from bitmap data comprising:

color number processing means (fig. 4, 203 and 204, column 8, lines 8-43) for deciding on at least one kind of representative color by compacting color data of said image;

representative color processing means (205)for color processing of said representative color; and

image restoring means (107) for converting said image into an image on the basis of said color processed representative color and is also forming image synthesis through the OR gate 210.

As seen in figure 8, (column 10, lines 1-67) Chikauchi teaches that each time a new character (including a control code) that the discriminating section is discriminating if a particular data item, then the color selector acquires data in a particular amount (understood to be an area of size), at this point a representative color is found by utilizing the color table. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the system as taught by Chikauchi is taking into consideration all types of image including a photo image.

Murakami et al. discloses (column 6, lines 4-27) an image processing apparatus for generation of an outputting image by color processing to convert a color image into color data adapted for said output unit, compromising:

object image processing means (fig. 2, 100, discrimination unit, (column 6, lines 28-36) for generating an image having color information of a pixel, by performing color processing on color data of a command image on the basis of color palette information given to the bits belonging to region specified by a drawing command. Murakami teaches that the discriminator decides if the each pixel coming in belongs to a character or photograph, color or monochrome for the image.

Chikauchi and Murakami et al. are analogous art because they both are from the same field of endeavor, image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the discriminating unit of Murakami et al. with the system of Chikauchi.

The suggestion/motivation for doing so would have been to provide for discriminating between a line or photograph and color or monochrome and further the data composite unit allows for putting the image together for printing or for viewing on a monitor

Therefore, it would have been obvious to combine Murakami et al. with Chikauchi to obtain the invention as specified in claim 42-44.

Regarding claim 45, Murakami et al. discloses (column 6, lines 4-27) an image processing apparatus for generation of an outputting image by color processing to convert a color image into color data adapted for said output unit, compromising:

command image processing means (fig. 2, 100, discrimination unit, (column 6, lines 28-36) for generating an image having color information of a pixel, by performing color processing on color data of a command image on the basis of color palette information given to the bits belonging to region specified by a drawing command. Murakami teaches that the discriminator decides if the each pixel coming in belongs to a character or photograph, color or monochrome for the image. As can be seen in figure 3, the incoming values are transduced from RGB to Y and the two values of chrominance. It would have been obvious to one of ordinary skill in the art at the time the invention was made that although Murakami has not explicitly disclosed that each pixel is color processed on the basis of a color palette, that by dividing each pixel into the values of luminance and chrominance is utilizing color space processing.

Color palette information extracting means (101, column 7, lines 45-68) for extracting said color palette information on said command image;

extracted palette color processing mans for performing said color processing on the basis of said color palette information;

image drawing means for converting said command image into said first pixel image on the basis of said color processed color palette.

Regarding claim 46, the claim is analogous to claim 5.

Regarding claims 47-48, Chikauchi discloses (fig. 2, column 6, lines 22-42) an image processing method for generation of an outputting image by color processing to convert a color image described in an outputting control language for output unit being used to convert into color data adapted for an output unit wherein image processing means for processing an image having color information for pixel processing of an image generated from bitmap data comprising:

color number processing means (fig. 4, 203 and 204, column 8, lines 8-43) for deciding on at least one kind of representative color by compacting color data of said image;

representative color processing means (205)for color processing of said representative color; and

image restoring means (107) for converting said image into an image on the basis of said color processed representative color and is also forming image synthesis through the OR gate 210.

As seen in figure 8, (column 10, lines 1-67) Chikauchi teaches that each time a new character (including a control code) that the discriminating section is discriminating

if a particular data item, then the color selector acquires data in a particular amount (understood to be an area of size), at this point a representative color is found by utilizing the color table. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the system as taught by Chikauchi is taking into consideration all types of image including a photo image. Outputting control language converting means (206) for converting into outputting control language said image for which the representative color is decided on. Chikauchi teaches (column 8, lines 58-67 and column 91-19, lines) that the print information is converted to print language for output on the printer.

Murakami et al. discloses (column 6, lines 4-27) an image processing apparatus for generation of an outputting image by color processing to convert a color image into color data adapted for said output unit, compromising:

object image processing means (fig. 2, 100, discrimination unit, (column 6, lines 28-36) for generating an image having color information of a pixel, by performing color processing on color data of a command image on the basis of color palette information given to the bits belonging to region specified by a drawing command. Murakami teaches that the discriminator decides if the each pixel coming in belongs to a character or photograph, color or monochrome for the image.

Chikauchi and Murakami et al. are analogous art because they both are from the same field of endeavor, image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the discriminating unit of Murakami et al. with the system of Chikauchi.

The suggestion/motivation for doing so would have been to provide for discriminating between a line or photograph and color or monochrome and further the data composite unit allows for putting the image together for printing or for viewing on a monitor

Therefore, it would have been obvious to combine Murakami et al. with Chikauchi to obtain the invention as specified in claim 47-48.

Regarding claim 49, Murakami et al. discloses (column 6, lines 4-27) an image processing apparatus for generation of an outputting image by color processing to convert a color image into color data adapted for said output unit, compromising:

command image processing means (fig. 2, 100, discrimination unit, (column 6, lines 28-36) for generating an image having color information of a pixel, by performing color processing on color data of a command image on the basis of color palette information given to the bits belonging to region specified by a drawing command. Murakami teaches that the discriminator decides if the each pixel coming in belongs to a character or photograph, color or monochrome for the image. As can be seen in figure 3, the incoming values are transduced from RGB to Y and the two values of chrominance. It would have been obvious to one of ordinary skill in the art at the time the invention was made that although Murakami has not explicitly disclosed that each pixel is color processed on the basis of a color palette, that by dividing each pixel into the values of luminance and chrominance is utilizing color space processing.

Color palette information extracting means (101, column 7, lines 45-68) for extracting said color palette information on said command image;

extracted palette color processing mans for performing said color processing on the basis of said color palette information;

image drawing means for converting said command image into said first pixel image on the basis of said color processed color palette..

Regarding claim 50, Murakami et al. discloses in figure 4, BHT (620) for printer, which it would have been obvious to one of ordinary skill in the art at the time the invention was made is outputting language is printer description language.

Regarding claim 51, Murakami et al. discloses in figure 4, BHT (610) for display, which it would have been obvious to one of ordinary skill in the art at the time the invention was made is outputting language is for the display unit.

Regarding claim 52, Murakami et al. discloses in figure 4, BHT (610) for display, which it would have been obvious to one of ordinary skill in the art at the time the invention was made is outputting language is for the display unit and can be adapted for GDI or any language necessary.

Regarding claims 53-54, Chikauchi discloses (fig. 2, column 6, lines 22-42) an image processing method (within a computer system) for generation of an outputting image by color processing to convert a color image described in an outputting control language for output unit being used to convert into color data adapted for an output unit wherein image processing means for processing an image having color information for pixel processing of an image generated from bitmap data comprising:

color number processing means (fig. 4, 203 and 204, column 8, lines 8-43) for deciding on at least one kind of representative color by compacting color data of said image;

representative color processing means (205)for color processing of said representative color; and

image restoring means (107) for converting said image into an image on the basis of said color processed representative color and is also forming image synthesis through the OR gate 210.

As seen in figure 8, (column 10, lines 1-67) Chikauchi teaches that each time a new character (including a control code) that the discriminating section is discriminating if a particular data item, then the color selector acquires data in a particular amount (understood to be an area of size), at this point a representative color is found by utilizing the color table. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the system as taught by Chikauchi is taking into consideration all types of image including a photo image. Outputting control language converting means (206) for converting into outputting control language said image for which the representative color is decided on. Chikauchi teaches (column 8, lines 58-67 and column 91-19, lines) that the print information is converted to print language for output on the printer.

Murakami et al. discloses (column 6, lines 4-27) an image processing apparatus for generation of an outputting image by color processing to convert a color image into color data adapted for said output unit, compromising:

object image processing means (fig. 2, 100, discrimination unit, (column 6, lines 28-36) for generating an image having color information of a pixel, by performing color processing on color data of a command image on the basis of color palette information given to the bits belonging to region specified by a drawing command.

Murakami teaches that the discriminator decides if the each pixel coming in belongs to a character or photograph, color or monochrome for the image.

Chikauchi and Murakami et al. are analogous art because they both are from the same field of endeavor, image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the discriminating unit of Murakami et al. with the system of Chikauchi.

The suggestion/motivation for doing so would have been to provide for discriminating between a line or photograph and color or monochrome and further the data composite unit allows for putting the image together for printing or for viewing on a monitor

Therefore, it would have been obvious to combine Murakami et al. with Chikauchi to obtain the invention as specified in claim 53-54.

Regarding claim 55, the claim is analogous to claim 5.

Regarding claims 56-57, Chikauchi discloses (fig. 2, column 6, lines 22-42) an image processing method (within a computer system) for generation of an outputting image by color processing to convert a color image described in an outputting control language for output unit being used to convert into color data adapted for an output unit wherein image processing means for processing an image having color information for pixel processing of an image generated from bitmap data comprising:

color number processing means (fig. 4, 203 and 204, column 8, lines 8-43) for deciding on at least one kind of representative color by compacting color data of said image;

representative color processing means (205)for color processing of said representative color; and

image restoring means (107) for converting said image into an image on the basis of said color processed representative color and is also forming image synthesis through the OR gate 210.

As seen in figure 8, (column 10, lines 1-67) Chikauchi teaches that each time a new character (including a control code) that the discriminating section is discriminating if a particular data item, then the color selector acquires data in a particular amount (understood to be an area of size), at this point a representative color is found by utilizing the color table. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the system as taught by Chikauchi is taking into consideration all types of image including a photo image. Outputting control language converting means (206) for converting into outputting control language said image for which the representative color is decided on. Chikauchi teaches (column 8, lines 58-67 and column 91-19, lines) that the print information is converted to print language for output on the printer.

Murakami et al. discloses (column 6, lines 4-27) an image processing apparatus for generation of an outputting image by color processing to convert a color image into color data adapted for said output unit, compromising:

object image processing means (fig. 2, 100, discrimination unit, (column 6, lines 28-36) for generating an image having color information of a pixel, by performing color processing on color data of a command image on the basis of color palette information given to the bits belonging to region specified by a drawing command.

Murakami teaches that the discriminator decides if the each pixel coming in belongs to a character or photograph, color or monochrome for the image.

Chikauchi and Murakami et al. are analogous art because they both are from the same field of endeavor, image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the discriminating unit of Murakami et al. with the system of Chikauchi.

The suggestion/motivation for doing so would have been to provide for discriminating between a line or photograph and color or monochrome and further the data composite unit allows for putting the image together for printing or for viewing on a monitor

Therefore, it would have been obvious to combine Murakami et al. with Chikauchi to obtain the invention as specified in claim 56-57.

Regarding claim 58, the claim is analogous to claim 6.

Allowable Subject Matter

16. Claims 7-12, 14-18, 27-33, and 34-38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L Jones whose telephone number is (703) 305-4675. The examiner can normally be reached on Monday - Friday (7:00am - 3:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David L. Jones

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